

Using Hazardous Chemicals in Laboratories

WAC 296-828-200

Section Contents

YOUR RESPONSIBILITY:

To protect employees from laboratory use of hazardous chemicals

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WAC 296-828-20005

Chemical Hygiene Plan

You must

- Develop and carry out a written chemical hygiene plan (CHP) that will protect your employees from hazardous substances in the laboratory and keep exposure levels below those listed in Respiratory Hazards, Chapter 296-841 WAC.
- Make sure the written plan is readily available to employees and their representatives.
- Include the following elements in your written CHP:
 - The names or job titles of the chemical hygiene officer, other personnel responsible for implementing the CHP, or when appropriate, the members of a chemical hygiene committee
 - Standard operating procedures that provide employee protection when working with hazardous substances
 - Criteria for how you will select and use control measures to reduce employee exposures to hazardous chemicals, especially chemicals known to be extremely hazardous
 - Additional employee protection for select carcinogens, reproductive toxins, and chemicals with high degree of acute toxicity. The following will be considered, when appropriate:
 - The establishment of exposure control areas
 - Containment devices, such as fume hoods or glove boxes
 - The safe removal of contaminated waste
 - Procedures for decontamination
 - Specific measures to make sure fume hoods and other protective equipment provide proper and adequate performance and are properly functioning

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Chemical Hygiene Plan (Continued)

- The circumstances when specific laboratory operation, activity, or procedure requires prior approval from the employer or their designated representative before implementation
- A description of how you are going to train and inform your employees about laboratory use of hazardous chemicals
- A description of your provisions for medical consultations and medical examinations
- Review and evaluate the effectiveness of your written CHP at least annually and update as necessary.



Reference:

This publication can provide you with additional information to help you with your written chemical hygiene plan:

- National Research Council, Prudent Practices for Disposal of Chemicals from Laboratories, National Academy Press, Washington, DC, 1995.



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WAC 296-828-20010

Exposure Evaluation

IMPORTANT:

For any of the specific substances listed in Table 2 of the scope of this Chapter, you need to follow the exposure evaluation procedures found in the Chapters regulating those substances if employee exposure routinely exceeds the AL or PEL. For all other employee exposures follow this section to determine exposure evaluation procedures.

You must

- Determine if you could have a respiratory hazard as described in Chapter 296-841 WAC, Respiratory Hazards.



Reference:

For additional requirements relating to respiratory hazards, see:

- Chapter 296-841 WAC, Respiratory Hazards
- Chapter 296-842 WAC, Respirators
- The specific rule for your chemical

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Exposure Evaluation (Continued)

You must

- Provide written notification of exposure monitoring results to employees represented by your exposure evaluation, within 5 business days after the results become known to you.



Note:

- You can notify employees either individually or by posting the notification in areas readily accessible to all affected employees.
- Posted notifications may need information that allows affected employees to determine which monitoring results apply to them.
- Notification may be:
 - In any written form, such as hand-written or e-mail.
 - Limited to the required information, such as exposure monitoring results.



Reference:

For additional requirements relating to employee exposure records, go to Employee Medical and Exposure Records, Chapter 296-802 WAC.



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WAC 296-828-20015

Training

You must

- Inform employees about the presence of hazardous chemicals at the following times:
 - At the time of initial assignment to a work area where hazardous chemicals are present
 - Prior to situations involving a new exposure to hazardous chemicals
- Train employees on all of the following:
 - Methods and observations for detecting the presence or release of hazardous substances. Examples of these methods and observations may include:
 - Monitoring conducted by you
 - Continuous monitoring devices
 - Visual appearance or odor of hazardous chemicals when being released.
 - The physical and health hazards of chemicals in the work area
 - The procedures and measures employees can use to protect themselves from hazardous substances. Examples of these include:
 - Appropriate work practices
 - Emergency procedures
 - Personal protective equipment
- Provide refresher training to fit your needs

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Training (Continued)

- Provide information to employees on all of the following:
 - The contents of this Chapter and where to find a copy
 - Permissible exposure limits found in Chapter 296-841 WAC, Respiratory Hazards
 - Any recommended exposure levels for compounds without an exposure limit in the WISHA rules. Examples include:
 - The PELs found in the National Institute for Occupational Safety and Health (NIOSH) NIOSH Pocket Guide to Chemical Hazards 2004
 - or**
 - The American Conference of Governmental Industrial Hygienists (ACGIH®) Documentation of the Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs), 7th Edition.
 - Signs and symptoms associated with exposures to hazardous chemicals used in the laboratory.
 - Where to find a copy of:
 - Your chemical hygiene plan
 - Material safety data sheets (MSDSs), including those received from the chemical suppliers
 - Reference material on the hazards, safe handling, storage, and disposal of hazardous chemicals found in the laboratory.



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WAC 296-828-20020

Labeling and Material Safety Data Sheets (MSDSs)

You must

- Make sure labels on incoming containers aren't removed or defaced.
- Keep and make available to employees any MSDS received with an incoming container of hazardous chemicals.

WAC 296-828-20025

Chemicals Produced in Laboratories

You must

- Follow Table 3 for chemical substances produced in your laboratory.

Table 3
Lab Produced Chemical Substance Requirements

If	Then
The chemical is a hazardous chemical	Follow all appropriate requirements of this Chapter
A chemical by-product is produced and its composition is unknown	Assume it's a hazardous chemical and Follow your chemical hygiene plan to protect employees
You produce chemicals in your laboratory for users outside the laboratory	Follow Chapter 296-839 WAC, MSDS and Label Preparation



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WAC 296-828-20030

Medical Evaluations

IMPORTANT:

For any of the specific substances listed in Table 2 of the scope of this chapter, you need to follow the medical evaluation procedures found in the chapters regulating those substances if employee exposure routinely exceeds the AL or PEL. For all other employee exposures follow this section to determine medical evaluation procedures.

You must

- 1) Make medical evaluations available when:
 - An employee develops signs or symptoms associated with a hazardous substance from laboratory exposure.
 - Any emergency situation that could cause a hazardous exposure, such as a spill, leak, or explosion, occurs.
 - A medical provider recommends a follow-up evaluation.
 - Exposure monitoring for any of the substances found in Table 2 reveals exposures routinely over the action level (AL) or in the absence of an AL the permissible exposure level (PEL).
- 2) Make sure medical evaluations are provided at reasonable times and places, and at no cost to employees.



Note:

This includes travel costs and wages associated with any time spent obtaining the medical evaluation.

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Medical Evaluations (Continued)

You must

- Provide the LHCP the following information before the medical evaluation is performed:
 - The name of the hazardous chemicals the employee may have been exposed to
 - Any signs or symptoms of exposure the employee has.
 - A description of the conditions under which the exposure occurred.
 - The exposure monitoring results for the conditions, if available.
- Obtain the LHCP's written opinion for each medical evaluation that includes the following:
 - Recommendations for medical follow-up
 - Any medical conditions found that would increase the employee's risk for impairment from exposure to a hazardous chemical
 - A statement that the employee has been informed of exposure-related medical results and conditions that require further examination or treatment
 - A written opinion that doesn't contain any medical information unrelated to the employee's occupational exposures
- If the written opinion contains any medical information unrelated to occupational exposures, return it to the LHCP and obtain a revised version without the additional medical information



Reference:

For additional requirements relating to employee medical records, go to Employee Medical and Exposure Records, Chapter 296-802 WAC.

